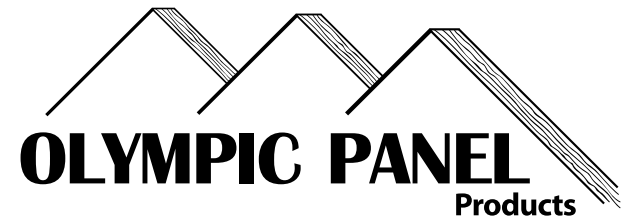




HOW TO CHOOSE COST EFFECTIVE SIGN BOARD



Product Name	Highway HDO®	SignReady UV™	Pre-finished UV™	Signal® MDO	Pre-Primed MDO	Crezon/Two Step MDO	Guardian® MDO
Description	Premium, high durability, HDO plywood, prepped for reflective film or exterior paint for Fed/State/Muni highway & commercial signage.	Prefinished, high gloss MDO plywood ready for wide layout digital printers, vinyl letters & paints; It has a 5 year limited warranty against flaking & peeling.	Prefinished, satin gloss MDO plywood ready for wide layout digital printers, vinyl letters & paints; It has a 2 year limited warranty against flaking & peeling.	MDO overlaid, hardwood faced plywood with tight core for superb machinability and weatherability; ideal for cutout letters & quality signs.	Proprietary, thermo-set, acrylic, primed MDO which is applied to 2 step, Douglas Fir/Hemlock plywood.	Premium, unfinished, paint grade, medium density overlaid plywood which provides a superior surface for finishing.	Economical, paint grade, medium density overlaid plywood provides a good surface for finishing.
Panel Construction	Premium, High Density Overlaid, hardwood faced plywood with D Fir inner plys; 2 Step layup with minimal core voids; Standard & Texas cores available Made in the USA; Meets APA PS 1-07	Proprietary, Urethane-acrylic, cross-linked, UV cured finish applied to MDO on hardwood faced plywood with Douglas Fir/Hemlock inner plys; 2 Step layup; Made in the USA; Meets APA PS 1-07	Proprietary, Urethane-acrylic, cross-linked, UV cured finish applied to MDO on Douglas Fir/Hemlock plywood; 2 Step layup; Made in the USA; Meets APA PS 1-07	Medium Density Overlaid, hardwood faced plywood with Douglas Fir/Hemlock inner plys; 2 Step layup with minimal core voids; Made in the USA; Meets APA PS 1-07	Proprietary, thermo-set acrylic primer applied to Medium Density Overlaid plywood with Douglas Fir/Hemlock construction; 2 Step layup; Made in the USA; Meets APA PS 1-07	Medium Density Overlaid plywood with Douglas Fir/Hemlock construction; 2 Step layup; Made in the USA; Meets APA PS 1-07	Medium Density Overlaid plywood with Douglas Fir/Hemlock construction; 1 Step layup; Made in the USA; Meets APA PS 1-07
Glue Bond	Waterproof glue bond	Waterproof glue bond	Waterproof glue bond	Waterproof glue bond	Waterproof glue bond	Waterproof glue bond	Waterproof glue bond
Working Faces	2 faces only	1 or 2 faces 1 face with MDO or primed back	1 or 2 faces 1 face with MDO or primed back	2 faces only	1 or 2 faces 1 face with MDO back	1 or 2 faces 1 face w/no back or optional backer	4: 2 face or 1 face – no back; 5: 1 face – no back
Colors & Surface Finishes	Colors: Natural & Black; Buff & Black require prep	Color: White, High Gloss Reflectance of 75 to 85 Factory sawn & painted to match face All edges must be sealed	Color: White, Satin Gloss Reflectance of 25 to 35 Factory sawn & primed All edges must be sealed	Unfinished Kraft paper Prime before over coating	Color: off white primer Factory primed All edges must be sealed	Unfinished Kraft paper Prime before over coating Factory sawn, unfinished All edges must be sealed	Unfinished Kraft paper Prime before over coating Factory sawn, unfinished All edges must be sealed
Working Edges	Factory sawn, unfinished All edges must be sealed	Factory sawn & painted to match face All edges must be sealed	Factory sawn & primed All edges must be sealed	Factory sawn, unfinished All edges must be sealed	Factory primed All edges must be sealed	Factory sawn, unfinished All edges must be sealed	Factory sawn, unfinished All edges must be sealed
Product Size Spec							
Thicknesses	3/8", 1/2", 5/8", 3/4" & 1"	3/8" (5 ply), 1/2", 5/8" & 3/4"	1/2" only	3/8", 1/2", 5/8" & 3/4"	5/16", 3/8", 1/2", 5/8", 3/4" & 1-1/8"	5/16", 3/8", 1/2", 5/8", 3/4" & 1-1/8"	5/16", 3/8", 1/2", 5/8", 3/4", 1-1/8", 1-1/4" & 1-1/2"
Widths/Lengths	4' X 8' & 10' (10' w/D fir only)	4' X 8' & 10'	4' X 8' & 10'	4' X 8'	4' X 8' & 10'	4' X 8' & 10'	4' & 5' X 8' & 10'
Physical Properties	3/8" to 1/2"	5/8" to 1"	1/2"	3/8" to 1/2"	5/8" to 3/4"	3/8" to 1/2"	5/8" to 1-1/8"
Modulus of Rupture	6,900 psi	6,800 psi	6,670 psi	6,860 psi	6,905 psi	7,544 psi	6,670 psi
Modulus of Elasticity	846,890 psi	892,720 psi	795,050 psi	853,565 psi	846,890 psi	879,603psi	795,050 psi
Lineal Expansion	.045%	.056%	.057%	0.050%	0.045%	0.042%	.057%
Thickness Swell	3.4%	3.4%	3.8%	3.8%	3.4%	3.4%	3.8%
Water Absorption (24 Hrs)	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%
Internal Bond	173 psi	185 psi	180 psi	134 psi	173 psi	206 psi	180 psi
Shelf Stiffness E1 ASTM D-3043 C	68,280 lb-in/ft ⁴	602,180 lb-in/ft ⁴	Not Applicable	Not Applicable	68,280 lb-in/ft ⁴	322,465 lb-in/ft ⁴	74,770 lb-in/ft ⁴
Shelf Bending FbS ASTM D-3043 C	1,625 lb-in/ft ⁶	6,420 lb-in/ft ⁶	Not Applicable	Not Applicable	1,625 lb-in/ft ⁶	4,785 lb-in/ft ⁶	1,615 lb-in/ft ⁶
Face Screwholding	414 lbs	432 lbs	430 lbs	449 lbs	414 lbs	454 lbs	430 lbs
Edge Screwholding	Not Applicable	418 lbs	Not Applicable	408 lbs	Not Applicable	422 lbs	Not Applicable
Moisture Content	6-9%	6-9%	6-9%	6-9%	6-9%	6-9%	6-9%
Specific Gravity	.572	.592	.592	.527	.572	.592	.527
Density	35.6 lbs/ft ³	36.9 lbs/ft ³	36.9 lbs/ft ³	32.9 lbs/ft ³	35.6 lbs/ft ³	36.9 lbs/ft ³	36.9 lbs/ft ³
Flame Spread ^a ASTM E-84	76 - 200 ^b	76 - 200 ^b	76 - 200 ^b	76 - 200 ^b	76 - 200 ^b	76 - 200 ^b	76 - 200 ^b
Smoke Developed E84	25 - 270 ^b	25 - 270 ^b	25 - 270 ^b	25 - 270 ^b	25 - 270 ^b	25 - 270 ^b	25 - 270 ^b
Flame/Smoke E-84	Class C	Class C	Class C	Class C	Class C	Class C	Class C
Formaldehyde	< 0.01 ppm	0.0 ppm	0.0 ppm	< 0.01 ppm	< 0.01 ppm	0.08 ppm	< 0.01 ppm
Panel Tolerances⁴							
Thickness Tolerance	3/8" to 3/4" = +/- 1/32" 13/16" plus = +/- 5%	3/8" to 3/4" = +/- 1/32" 13/16" plus = +/- 5%	3/8" to 3/4" = +/- 1/32" 13/16" plus = +/- 5%	3/8" to 3/4" = +/- 1/64" 13/16" plus = +/- 5%	3/8" to 3/4" = +/- 1/32" 13/16" plus = +/- 5%	3/8" to 3/4" = +/- 1/32" 13/16" plus = +/- 5%	3/8" to 3/4" = +/- 1/32" 13/16" plus = +/- 5%
Panel Tolerance	+0, -1/16" (.062")	+0, -1/16" (.062")	+0, -1/16" (.062")	+0, -1/16" (.062")	+0, -1/16" (.062")	+0, -1/16" (.062")	+0, -1/16" (.062")
Squareness	1/16" (.062")	1/16" (.062")	1/16" (.062")	1/16" (.062")	1/16" (.062")	1/16" (.062")	1/16" (.062")
Straightness	1/16" (.062")	1/16" (.062")	1/16" (.062")	1/16" (.062")	1/16" (.062")	1/16" (.062")	1/16" (.062")



Environmental Impact

Olympic Panel produces overlaid plywood from veneer peeled at the Olympic plant and from purchased veneer. All veneer and plywood panels are produced in accordance with the following principals:

- Logs originate in sustainable, secondary growth forests which are managed according to Federal and State laws and regulations.
- Olympic Panel uses energy efficient, environmental control technology to reduce emissions below federal and state guidelines.
- Olympic Panel uses process by-products to produce energy.
- Olympic's products are renewable, biodegradable and recyclable.

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PREMIUM SIGN BOARDS

Highway® HDO

Product: Premium, high durability, HDO plywood, prepped for reflective film or exterior paint for Fed, State & Municipal highway and commercial signage



Features and Benefits

- Buff Highway® HDO is reflective film or paint ready
- Texas DMS 7100 & Illinois T-7-2006 are available
- Extremely durable with long life & weatherability
- High strength & screwholding, light weight
- Very low formaldehyde; meets CARB

Specifications:

Thicknesses: 3/8", 1/2", 5/8", 3/4" & 1" Panel Sizes: 4' X 8' & 10'. Highway HDO 10' is available with a fir face only.

Pre-finished UV™

Product: Prefinished, satin gloss MDO plywood ready for wide layout digital printers, vinyl letters & paints. It has a 2 year limited warranty against flaking & peeling.



Features and Benefits

- Economical, high gloss finish
- Ready for vinyl letter, digital print & paint
- Excellent scratch & mar resistance
- Superior weatherability
- 2 year flaking & peeling warranty
- High strength, light weight
- Very low formaldehyde; meets CARB

Specifications:

Thicknesses: 1/2" only Panel Sizes: 4' X 8' & 10'

SignReady UV™

Product: Prefinished, high gloss MDO plywood ready for wide layout digital printers, vinyl letters & paints. It has a 5 year limited warranty against flaking & peeling



Features and Benefits

- Smooth, high gloss finish
- Ready for vinyl letter, digital print & paint
- Great scratch, chip & mar resistance
- Exceptional weatherability
- Low wood grain & no patch transfer
- 5 year flaking & peeling warranty
- Waterproof bond = water/humidity resistance
- Very low formaldehyde; meets CARB

Specifications:

Thicknesses: 3/8", 1/2", 5/8" & 3/4" Panel Sizes: 4' X 8' & 10'

Signal® MDO

Product: MDO overlaid, hardwood faced plywood with tight core for superb machinability and weatherability. It is ideal for cutout letters & quality signs.



Features and Benefits

- Tightly laid core for excellent machinability
- Excellent for cut out letters
- Long term smooth surface for paints & coatings
- High strength, light weight
- High Face/Edge screwholding
- Very low formaldehyde; meets CARB

Specifications:

Thicknesses: 3/8", 1/2", 5/8" & 3/4" Panel Sizes: 4' X 8'

MEDIUM DENSITY OVERLAYS

Pre-Primed MDO

Product: Proprietary, thermo-set, acrylic, primed MDO which is applied to 2 step, Douglas Fir/Hemlock plywood.

Features and Benefits

- Economical, smooth surface for high quality enamels
- Pre-primed MDO saves priming time & labor
- Superior surface quality & life
- High strength & screwholding, light weight
- Waterproof bond = water/humidity resistance
- Very low formaldehyde; meets CARB

Specifications:

Thicknesses: 5/16", 3/8", 1/2", 5/8", 3/4" & 1-1/8"
Panel Sizes: 4' X 8' & 10'

Crezon®/Two Step® MDO

Product: Premium, unfinished, paint grade, MDO plywood which provides a superior surface for finishing

Features and Benefits

- Economical, smooth surface for high quality paints
- Superior surface & life
- High strength, light weight
- Waterproof bond = water/humidity resistance
- High Face/Edge screwholding
- Very low formaldehyde; meets CARB

Specifications:

Thicknesses: 5/16", 3/8", 1/2", 5/8", 3/4" & 1-1/8"
Panel Sizes: 4' X 8' & 10'

Guardian® MDO

Product: Economical, paint grade, medium density overlaid plywood provides a good surface for finishing.

Features and Benefits

- Economical, standard MDO panel
- Easily painted, Durable surface
- High strength & screwholding, light weight
- Waterproof bond = water/humidity resistance
- Very low formaldehyde; meets CARB

Specifications:

Thicknesses: 5/16", 3/8", 1/2", 5/8", 3/4" & 1-1/8"
Panel Sizes: 4' & 5' X 8' & 10'